**Assignment 3**

1. Create an abstract class Bird which takes 2 constructor parameters (name, color and create 3 named sub classes like Parrot, Eagle and Duck. Design appropriate common methods in the Bird class and override them in the respective sub classes to show appropriate behavior of a named bird.
2. Create an abstract class Figure with constructor having 2-dimension variables int dim1 and int dim2 and an abstract method area(). Create two subclass Triangle and Rectangle and override the area method defined in the Figure class. Test the code by running them.

public abstract class Figure {

protected int dim1;

protected int dim2;

public Figure(int dim1, int dim2) {

this.dim1 = dim1;

this.dim2 = dim2;

}

abstract public double area();

}

2) Create an interface named TvRemote with appropriate methods(switchOff(), switchOn(), changeChannel( int ch)) in it and use them in 3 different Branded TVs like BPLTv, SonyTv and PanasonicTv..

3) Write a program to extend one interface to another and then implement in the classes

4)Create a package org.demo.tools and org.demo.client .

Create Calculator class in tools package which contains add,multiply,subtract methods with 2 parameters set using Constructor of Calculator class.

Use Calculator class from another class MathTester in **client** package, call all the methods of Calculator from MathTester

5) Check the access specifiers in different packages.

6) Write a class which shows the usage of instanceof operator

7) Check the type casting concept in super class and subclass